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... how is glyphosate used?

Professional formulated plant protections products based on glyphosate are either diluted with water in a spray tank, or applied undiluted with specialized equipment. Depending on the geography, the crop and the type of weeds to be controlled, the amount of glyphosate sprayed varies typically between 0.36 kg and 2.52 kg glyphosate/hectare.

(© Monsanto) [1]

There are various methods of application of glyphosate formulations. The most commonly used ones including tractor-mounted hydraulic sprayers which can capture spraying volumes rangingbetween 100 and 400 litres.
However, some agricultural situation may require hand held equipment including hand held sprayers such as rotary atomizers and knapsacks, aerial (limited in the EU to Hungary for pre-harvest application in specific conditions in maize and sunflower only), weed wipers (rope wick) and cut stump treatments for trees. Generally, applications are designed to avoid contact with the crop, with the exception of pre-harvest applications. Specialized application techniques include shielded sprayers, spot applicators, brush applications to tree stumps, stem injections for trees and to persistent weeds such as Japanese knotweed and ready-to-use sprayers for the home and garden sector.

Glyphosate destroys weeds by preventing the synthesis of certain crucial amino acids at the growing points of a plant. Without these, the plant cannot metabolize and create new growth. Weeds must, therefore, be in the active growth phase in order for glyphosate to work. This is why farmers predominately apply glyphosate when weed species are already shooting but crop seeds have not yet begun to germinate. These "post-harvest treatments" were the first type of glyphosate application and are still the most commonly used management practice in Europe.

With regards to application timing differentiation can be made between the following main crop scenarios:

- Post-harvest pre-planting in row crops & post-harvest pre-emergence in row crops [2]
- Pre-harvest applications for weed control and to enhance crop ripening [3]
- Post-emergence inter-row in TNV´s (trees, nuts and vines), and in certain row crops with specialized equipment [4]

Additionally, also non-agricultural uses [5] exist.

Farmers have to follow good agricultural and management practices [6].

Last update: 10 March 2014

Benefits of glyphosate

A tool for sustainability [7]
Higher yields and easier harvests [8]
Can European agriculture afford to lose glyphosate? [9]

Source URL: http://www.glyphosate.eu/how-glyphosate-used

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[1] http://www.glyphosate.eu/sites/default/files/text-images/ba3_monsanto_-_sprayer_jaime_costa_0.jpg
[2] http://www.glyphosate.eu/post-harvest-pre-planting-applications-glyphosate
[3] http://www.glyphosate.eu/pre-harvest-applications-weed-control-and-enhance-crop-ripening
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